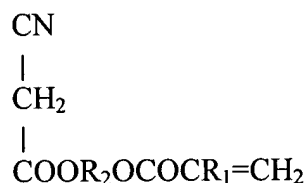


Claim 3. (original) Adhesives and polymers formed by the polymerisation of the reactive monomers of claim 1.

Claim 4. (original) Adhesive and coating compositions containing reactive monomers of claim 1.

Claim 5. (original) A method of synthesizing the reactive monomers of claim 1 by reaction of acrolein with esters of the formula



wherein R₁ is H or CH₃ and R₂ is alkyl, alkenyl, alkynyl, alkoxyalkyl, poly(oxyalkyl), aryl, cycloalkyl, or heterocyclyl radical, or is one of these moieties substituted with one or more of the other moieties and could also contain halogens.

Claim 6. (currently amended) A reactive monomer ~~Reactive monomers composition comprising:~~ ~~of claim 1 wherein they are stabilised against premature polymerisation with~~

the reactive monomers according to claim 1; and

a stabilizer against polymerization,

wherein the stabilizer is a free-radical polymerisation inhibitor ~~inhibitors, including but not limited to, hydroquinone, p-methoxyphenol, t-butyl catechol, present in an amount~~

~~amounts~~ of from 0.001% to 1% by weight of the monomer ; ~~with or an anionic~~
~~polymerisation inhibitor~~ ~~inhibitors including but not limited to sulphur dioxide, hydrogen~~
~~fluoride, phosphoric acid, phosphonic acids, sulfuric acid, sulphonic acid, carboxylic and~~
~~organic sulfonic acids, sultones, boron trifluoride and its complexes, phosphazenes, present~~
in an amount ~~amounts~~ of from 0.00001% to 1% by weight of the monomer.

Claim 7. (currently amended) The reactive ~~Reactive~~ monomers of claim 1,
wherein the monomer can be polymerized ~~characterised as being capable of polymerisation~~
~~to high molecular weight polymers~~ via anionic mechanisms, cationic mechanisms, or
radical mechanisms, ~~as well as~~ or a combination of ~~any of them~~ thereof.

Claim 8. (currently amended) The reactive ~~Reactive~~ monomers of claim 1,
wherein the monomer can be cured after polymerization to form ~~characterised as being~~
~~capable of curing to a different degree and state thus producing polymers of~~ rubbery,
thermoplastic, or ~~and~~ crosslinked polymers ~~nature, as well as the being capable of step-~~
~~wise cure, thus changing the nature of the polymer or adhesive bond from rubbery or~~
~~thermoplastic to crosslinked~~.

Claim 9. (currently amended) The reactive ~~Reactive~~ monomers of claim 1,
wherein the monomer can be polymerized ~~characterised as being capable of instantaneous~~
~~polymerisation~~ at ambient temperature when spread as a ~~thin~~ film between two substrates
~~producing an adhesive bond~~.

Claim 10. (currently amended) The reactive ~~Reactive~~ monomers of claim ~~[[1]]~~ 9,
wherein the substrates are made of characterised as being capable of bonding metals metal,
plastic plastics, rubber rubbers, glass, wood, paper, live soft tissue, or bone tissue.

Claim 11. (original) Compositions based on reactive monomers of claim 1
containing anionic polymerisation initiators, cationic polymerisation initiators, free-radical
polymerisation initiators, compounds generating radicals or ions under visible, ultraviolet
or electron beam irradiation.

Claim 12. (original). Compositions based on reactive monomers of claim 1
containing polymeric thickeners, viscosity regulators, plasticisers, thixotropic agents,
compatibilisers, adhesion promoters, pigments, colourants, fillers, deodorants and
perfumes.

Claim 13. (original) Compositions based on reactive monomers of claim 1
containing other monomers with a reactive bond, including but not limited to
cyanoacrylates.

Claim 14. (original) Application of reactive monomers of claim 1 in adhesives
and coatings in industry and medicine, and in the manufacture of positive and negative
photo or electron beam resists.

Claim 15. (new) The reactive monomer according to claim 1, wherein R₂ has from
1 to 16 carbon atoms.

Claim 16. (new) The reactive monomer according to claim 1, wherein R₂ has from 1 to 6 carbon atoms.

Claim 17. (new) The reactive monomer composition according to claim 6, wherein the free-radical polymerization inhibitor is hydroquinone, p-methoxyphenol, or t-butyl cathecol.

Claim 18. (new) The reactive monomer composition according to claim 6, wherein the anionic polymerization inhibitor is sulphur dioxide, hydrogen fluoride, phosphoric acid, phosphonic acid, sulfuric acid, sulphonic acid, carboxylic acid, organic sulfonic acid, sultone, boron trifluoride, boron trifluoride complexes, or phosphazene.

Claim 19. (new) The reactive monomers of claim 8, wherein the monomer is cured stepwise to produce a crosslinked polymer from a rubbery or thermoplastic polymer.

Claim 20. (new) The reactive monomers of claim 9, wherein the polymerized monomer forms an adhesive bond.

Claim 21. (new) A reactive monomer composition comprising:

the reactive monomer according to claim 1; and

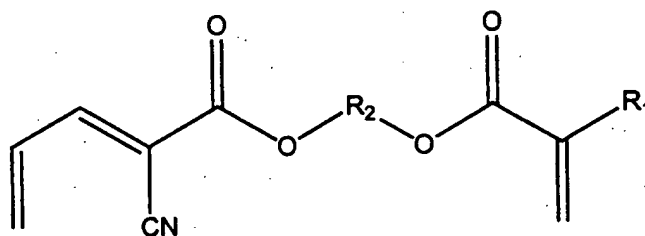
a polymerization initiator.

Claim 22. (new) the reactive monomer composition according to claim 21, wherein the polymerization initiator is an anionic polymerization initiator, cationic polymerization initiator, free-radical polymerization initiator, or a combination thereof.

Claim 23. (new) The reactive monomer composition according to claim 22, wherein the anionic polymerization initiator is pyridine, aminopyridine, vinylpyridine, methoxyethylpyridine, piperidine, picoline, lutidine, N, N-dimethyl-p-toluidine, N, N-dimethyl-o-toluidine, N, N-dimethyl-m-toluidine, triphenylphosphine, triethylphosphine, tribenzylamine, triethylamine, benzyldimethylamine, diethylenetriamine, benzyltriethylamine, tribenzylamine, poly(4-vinylpyridine), calixarene, polyethyleneglycol, phenolformaldehyde resins, vinylimidazole, triethanolaminatotitanium, aminosilanes, phosphites, metal acetylacetonates, N-(oxydiethylen)benzothiazole-2-sulfenamide, bismuth dimethyldithiocarbonate, or a combination thereof.

Claim 24. (new) The reactive monomer composition according to claim 22, wherein the free-radical polymerization initiator is methylethylketone peroxide, cyclohexyl peroxide, cumene hydroperoxide, dibenzoyl peroxide, or a combination thereof.

Claim 25. (new) Reactive monomers of the formula:



wherein R₁ is H and R₂ is a substituted or unsubstituted alkyl, alkenyl, alkynyl, alkoxyalkyl, poly(oxyalkyl), aryl, cycloalkyl, or heterocyclyl radical, wherein the substituent when present is at least one alkyl, alkenyl, alkynyl, alkoxyalkyl,

poly(oxyalkyl), aryl, cycloalkyl, or heterocyclyl radical or halogen and wherein the monomer is a liquid at ambient temperature.